

1. A thin film magnetic head including: two magnetic layers magnetically coupled to each other and having two magnetic poles which face each other with a gap layer in between and face a recording medium, a thin film coil provided between the two magnetic layers, and an insulating layer for insulating the thin film coil from the two magnetic layers, including:

a first magnetic film provided between the magnetic transducer film and the two magnetic layers; and

wherein the first magnetic film extends to a first position from a recording-medium-facing surface facing the recording medium,

the second magnetic film extends from the recording-medium-facing surface to a third position farther from the recording-medium-facing surface than the second position.

2. A thin film magnetic head according to claim 1, wherein a

length of the first magnetic film is equal to or less than 1/3 of a length of the insulating layer.

3. A thin film magnetic head according to claim 1, wherein the length of the first magnetic film is equal to or less than 10 μm .

4. A thin film magnetic head according to claim 1, wherein an end surface of the first magnetic film far from the recording-medium-facing surface is inclined so that an exterior angle between the end surface and a first magnetic film extending direction is more than 90° .

5. A thin film magnetic head according to claim 1, wherein the second magnetic film extends so that a surface of the second magnetic film close to the first magnetic film may be flat over the overall surface, and

the thin film coil is provided so that a position of a surface of the thin film coil close to the second magnetic film may be closer to the second magnetic film than a position of a surface of a portion of the gap layer near the recording-medium-facing surface, the surface being far from the second magnetic film.

6. A thin film magnetic head according to claim 1 further including a connect wiring having one end connected to the magnetic transducer film and the other end connected to an external circuit,

wherein the first magnetic film extends so as to coat a region in

which the connect wiring is provided.

7. A thin film magnetic head according to claim 1, wherein one of the two magnetic layers close to the first magnetic film is made of a different material from a material of the first magnetic film.

8. A thin film magnetic head according to claim 7, wherein the one magnetic layer is made of a material having a higher saturation magnetic flux density than a saturation magnetic flux density of the material of the first magnetic film.

9. A method of manufacturing a thin film magnetic head including: two magnetic layers magnetically coupled to each other and having two magnetic poles which face each other with a gap layer in between and face a recording medium, a thin film coil provided between the two magnetic layers, and an insulating layer for insulating the thin film coil from the two magnetic layers, including the steps of:

forming a magnetic transducer film;

forming a first magnetic film between the magnetic transducer film and the two magnetic layers so as to extend to a first position in a direction away from a recording-medium-facing surface facing the recording medium;

forming the thin film coil in a region farther from the recording-medium-facing surface than a second position by using as a

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reference position the second position farther from the recording-medium-facing surface than the first position; and

forming a second magnetic film opposite to the first magnetic film with the magnetic transducer film in between so as to extend from the recording-medium-facing surface to a third position farther from the recording-medium-facing surface than the second position.

10. A method of manufacturing a thin film magnetic head according to claim 9, wherein the first magnetic film is formed so as to have a length equal to or less than $1/3$ of a length of the insulating layer.

11. A method of manufacturing a thin film magnetic head according to claim 9, wherein the first magnetic film is formed so as to have a length of $10\text{ }\mu\text{m}$ or less.

12. A method of manufacturing a thin film magnetic head according to claim 9, wherein the first magnetic film is formed so that an end surface of the first magnetic film far from the recording-medium-facing surface may be inclined so that an exterior angle between the end surface and a first magnetic film extending direction is more than 90° .

13. A method of manufacturing a thin film magnetic head according to claim 9, wherein the second magnetic film is formed so that a surface of the second magnetic film close to the first magnetic film may be

flat over the overall surface, and

the thin film coil is formed so that a position of a surface of the thin film coil close to the second magnetic film may be closer to the second magnetic film than a position of a surface of a portion of the gap layer near the recording-medium-facing surface, the surface being far from the second magnetic film.

14. A method of manufacturing a thin film magnetic head according to claim 9 further including the step of forming a connect wiring having one end connected to the magnetic transducer film and the other end connected to an external circuit,

wherein the first magnetic film is formed so as to coat a region in which the connect wiring is provided.

15. A method of manufacturing a thin film magnetic head according to claim 9, wherein one of the two magnetic layers close to the first magnetic film is formed of a different material from a material of the first magnetic film.

16. A method of manufacturing a thin film magnetic head according to claim 15, wherein the one magnetic layer is formed of a material having a higher saturation magnetic flux density than a saturation magnetic flux density of the material of the first magnetic film.

17. A method of manufacturing a thin film magnetic head according to claim 9, wherein the step of forming the first magnetic film includes the steps of:

forming a frame pattern for selectively forming a plated film pattern, using a negative photoresist; and

forming the first magnetic film, that is the plated film pattern, using the frame pattern.

18. A method of manufacturing a thin film magnetic head according to claim 9, wherein the step of forming the first magnetic film includes the steps of:

forming a preparatory magnetic layer for serving as a preparatory layer for the first magnetic film; and

forming the first magnetic film by selectively etching the preparatory magnetic layer and thus patterning the preparatory magnetic layer.

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